

REMARKS

In the Office Action, the Examiner rejected claims 1, 8, 10-14, 17, and 25 under 35 U.S.C. § 103(a) as being unpatentable over Schwartz et al. (U.S. No. 5,813,849) in view of Altemark et al. (U.S. No. 5,055,032). In addition, the Examiner rejected claims 2, 3, 22, 23, and 24 under 35 U.S.C. § 103 as being unpatentable over Schwartz et al. in view of Altemark et al. as applied to claims 1 and 17, above and further in view of Sneed (U.S. No. 4,128,393).

In connection with the rejections, the Examiner stated that Schwartz et al. in view of Altemark teach all the limitations of the claims except that the wind shield has an upstanding wall portion with downwardly oriented openings for discharging rain and wind, and Sneed teaches a wind-shielding device (5) for a burner nozzle (3) wherein the wind-shielding device is arranged as an upstanding wall having a plurality of downwardly facing openings (6).

In regard to claims 2, 3, 22, 23, and 24, the Examiner stated it would have been obvious to modify the wind shield of Schwartz et al. to incorporate the upstanding wall and openings of Sneed as this arrangement allows for protection of the flame formed at the nozzle from wind gusts and allowing enough air to the nozzle to provide for proper combustion with openings arranged such that the flow of air is defused away from direct impingement on the flame.

It is respectfully submitted by the Applicants that the Examiner's combination of Schwartz et al. and Altemark et al. does not achieve the continuously operating flare pilot for igniting flammable fluids discharged from a flare stack of the present invention, nor would the present invention be obvious to those skilled in the art in view of the patents to Schwartz et al. and Altemark et al. for the following reasons.

In order to satisfy a prima facie case of obviousness, the prior art must contain some teaching suggestion or incentive that would have motivated an artisan to modify the reference.

See, In re Fine, 837 F.2d 1071, 1074, 5 USPQ 2d 1596, 1598 (Fed. Cir. 1988). The prior art must teach or suggest all of the limitations of the claims without the slightest recourse to the teachings in the application. See, Amgen, Inc. v. Chugai Pharmaceutical Co., Ltd., 927 F.2d 1200, 18 USPQ2d 1016 (Fed. Cir. 1991). The proper test is whether “the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a reasonable likelihood of success.” In re Dow Chemical Co. v. American Cyanamid Co., 837 F.2d 469, 473, 5 USPQ 2d 1529, 1531-32 (Fed. Cir. 1988).

The Schwartz et al. patent discloses a flame detection apparatus and methods for detecting the presence or non-presence of a flame from a location remote from the flame. The pilot burner 26 described in the Schwartz et al. patent is a cylindrical perforated wind shield attached to a conventional pilot burner nozzle which is attached to a gas pipe. As shown in FIGS. 5 and 7 of Schwartz et al., the cylindrical wind shield 40 includes a plurality of horizontal openings positioned completely around the top of the wind shield.

The Altemark et al. patent teaches a combustion burner of the type utilized in furnaces and the like. The combustion burner includes a flame retention cone within the burner apparatus which provides stability to the flame generated by the burner and low atmospheric polluting combustion. The conical flame retention device is perforated and it functions to retain flame inside the nozzle of the burner by having the gas injected into the inside of the flame retention device with air being injected through the perforations from the outside of the flame retention device. This is contrasted with the flame stabilizer of the present invention which is cylindrical and has holes around the sides thereof. The flame stabilizer is attached to a nozzle through which a fuel-air mixture is discharged into the flame stabilizer and into the wind shield of the flare pilot. One skilled in the art of pilot lights for flare stacks would not look to the combustion

burner art for maintaining a flame in wind and rain at the top of a flare stack. Further, the flame stabilizer of the present invention causes the fuel-air mixture discharged by way of the orifices in the nozzle to which the flame stabilizer is attached to be circulated in and around the stabilizer whereby the fuel-air mixture begins to burn and the flame produced in and above the stabilizer remains stable during pressure fluctuations. The flame retention device of Sneed functions in an entirely different way to produce a different result. Accordingly, it is respectfully requested by the Applicants that the Examiner withdraw the rejection of claims 1, 8, 10-14, 17 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Schwartz et al. in view of Altemark et al.

The Examiner rejected independent claims 2, 3, 22, 23, and 24 as being unpatentable over Schwartz et al. in view of Altemark et al. as applied to claims 1 and 17 above and further in view of Sneed (U.S. No. 4,128,393). In connection with this rejection, the Examiner stated that Schwartz et al. in view of Altemark et al. teach all the limitations of the claims except that the wind shield has an upstanding wall portion with downwardly oriented openings for discharging rain and wind. Further, the Examiner stated that Sneed teaches a wind-shielding device (5) for a burner nozzle (3) wherein the wind-shielding device is arranged as an upstanding wall having a plurality of downwardly facing openings (6).

For the reasons set forth above, the Applicants submit that Schwartz et al. in view of Altemark et al. does not teach all the limitations of the claims. Further, the Applicants contend that Sneed does not teach a wind shield having an upstanding wall portion with downwardly oriented openings for discharging wind and rain. The upstanding wall portion of the wind shield of the present invention is positioned at the front of the wind shield facing the open discharge end of the flare stack. Ignition flames from within the wind shield are discharged through the open upper end of the wind shield adjacent to the combustible fluid discharged from the flare

stack. The upstanding wall portion of the wind shield includes at least one, and more preferably, a plurality of downwardly facing openings formed therein. The openings function to allow a portion of rain and wind blowing in a direction from the back to the front of the wind shield and the wall portion thereof to exit the wind shield without creating a substantial back pressure within the wind shield.


The above is contrasted with the flame shielding device described in Sneed (U.S. No. 4,128,393) wherein the wind shield consists of a concave, spoon or shell shaped wall structure having openings therein which does not have an upstanding wall portion and is positioned such that the wind shield faces the wind which is opposite to the positioning of the upstanding wall portion of the wind shield of the present invention. The openings in the Sneed wind shield function to permit entry of enough air for proper combustion and to avoid reduced pressure within the wind shield. Thus, the Sneed wind shield with openings therein does not function in the same way or achieve the same result as the wind shield and upstanding wall portion thereof of the present invention which includes downwardly faced openings therein and functions to allow rain and wind blowing in a direction from the back to the front of the wind shield and upstanding wall portion and to exit the wind shield without creating back pressure in the wind shield.

Thus, the wind shield of Sneed functions in an entirely different manner than the wind shield and upstanding wall portion thereof of the present invention. One skilled in the art would not look to Sneed to solve the problem of wind and rain creating a substantial back pressure within the wind shield of the present invention. It is further submitted by the Applicants that a prima facie case of obviousness has not been established by the Examiner and accordingly, the

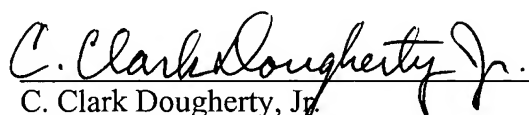
claims of the present application are not obvious over Schwartz et al., Altemark et al. or Sneed taken alone or together.

This is intended to be a complete response to the Office Action mailed on June 10, 2004, and the allowance of claims 1-8 and 10-25 is respectfully requested.

I hereby certify that this correspondence is being deposited in the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Non-Fee Amendment; Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on June 23, 2004.


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